

REMARKS

Amendments

Claim 1 is amended to refer to optional components B and C and to recite that the amount of component A in the composition is at least 75% by weight of component A based on the total weight of components A, B, and C. See, e.g., page 7, lines 28-32, page 8, line 21-page 9, line 23, and page 17, line 31.

Claims 2, 4, 6, 8, 10, 15, 16 and 19 are amended to clarify the language thereof. See, e.g., page 14, lines 8-10. Claims 10 and 19 are also amended to be consistent with amended claim 1. Claims 5 and 12 are amended to delete superfluous language. Additionally, the claims are amended to use language in accordance with conventional US practice.

New claims 27-43 are directed to further aspects of the invention and are supported throughout the disclosure. See, for example, page 6, lines 18-30, page 13, line 29-page 14, line 1, page 17, lines 8-14, page 17, lines 22-33, page 18, lines 1-3, page 18, lines 18-22, page 18, lines 26-33, page 22, lines 27-33, and page 23, lines 20-27.

Election

Applicants hereby affirm election of Group I, claims 1-17 and 21-26, drawn to devices. With respect to the non-elected process claims 18-20 of Group II, upon determination that the device claims are allowable, applicants request rejoinder pursuant to MPEP §821.04. It is noted that claims 18-20 depend from device claim 1.

Rejection under 35 USC 102(b) in view of Shipley et al.

Claims 1-9 are rejected as allegedly being anticipated in view of Shipley et al (US 2001/0006759). This rejection is respectfully traversed.

US '759 discloses a cured coating layer that is said to exhibit substantial flexibility. The layer has a dielectric constant of 3 or less. The layer is made from a composition comprising a resin binder, a reactive polybutadiene having one or more internal epoxide groups, and optionally a radiation sensitive component. Additionally, the composition preferably further comprises one

or more one crosslinking agents and a photoactive or thermal initiator system.

As stated in paragraph [0039], US '759 discloses that the crosslinkers can be amine-based materials, including melamine-formaldehyde resins. Cymel 300, 301, 303, 350, 370, 380, 1116 and 1130 are listed as suitable commercially available melamine resins. The amount of such crosslinkers in the composition is relatively low. See the end of paragraph [0039], where US '759 discloses that the amount of such crosslinkers is "between about 1 and 25 weight percent of the total solids of the composition."

US '759 does not disclose or suggest a composition as recited in applicants' claims wherein the amount of component A is at least 75% by weight, based on the total weight of components A, B, and C. Withdrawal of the rejection is respectfully requested.

Rejection under 35 USC 102(b) in view of Sinclair et al.

Claims 1-17 and 21-26 are rejected as allegedly being anticipated in view of Sinclair et al. (US 6,462,107). This rejection is respectfully traversed.

US '107 discloses a composition that can be used to form dielectric areas during the manufacturing of circuit boards. See, e.g., column 5, lines 26-28. As described at column 4, lines 19-31, the composition comprises a carrier solution, 20-60 wt% of an epoxy resin, 0.01-5 wt% of a basic catalyst, and 10-50 wt% of a film-forming polymer adduct. The latter is said to preferably include "a polyfunctional nucleophile such as a diamine, a dianhydride, or a novolac." See column 4, lines 19-31.

The rejection specifically refers to Example 4. This example describes the preparation of a composition from: 81.6 kg of solution from example 2, 23.4 kg of acetone, 18 kg of methyl ethyl ketone, 8.18 kg of epoxy resin, 11.4 kg of EPON 862, 2.46 kg of DDS, 3.27 kg of phthalic anhydride, and 1.65 kg of melamine (Cymel 303). In this composition, the amount of Cymel is significantly lower than 75 wt%. See also Examples O and P in Table 15, Examples E-J in Table 17, Examples Q-V in Table 17, Example 13 in Table 22, and Example 14 in Table 25, which additionally disclose compositions containing minor amounts of Cymel 303.

US '107 does not disclose or suggest a composition as recited in applicants' claims wherein the amount of component A is at least 75% by weight, based on the total weight of

components A, B, and C. Withdrawal of the rejection is respectfully requested.

Rejection under 35 USC 102(e) in view of Guillet et al.

Claims 1-12, 15, 16, and 21-26 are rejected as allegedly being anticipated in view of Guillet et al. (US 2005/0048803). This rejection is respectfully traversed.

In the rejection, the Examiner specifically refers to Example 2 of US '803. In this example, a composition is prepared which contains 0.4 g of the copolymer PVDC/PAN/PMMA, 9 g of the solvent dioxane, 0.5 g of Cymel 327, and 0.1 g of camphor. Thus, in this composition it is self evident that the amount of Cymel 327 in this composition is well below 75% by weight.

US '803 does not disclose or suggest a composition as recited in applicants' claims wherein the amount of component A is at least 75% by weight, based on the total weight of components A, B, and C. Withdrawal of the rejection is respectfully requested.

Rejection under 35 USC 103(a) in view of Gardon et al. and Imken et al.

Claims 1-12 and 20-26 are rejected as allegedly being obvious in view of Gardon et al. (US 5,175,227) in combination with Knudsen et al. (US 2002/0176989). This rejection is respectfully traversed.

Gardon et al. disclose a coating composition comprising: (1) a polyurethane polyol having a number average molecular weight in the range of from about 600 to about 3000 and a degree of dispersion in the range of from about 1.1 to about 3.5, and (2) a hydroxyl groups-reactive crosslinking agent. The polyurethane polyol comprises the reaction product of (A) a diol component selected from substantially monomeric, asymmetric diols wherein the hydroxyl groups are separated by 3 carbon atoms or less, and (B) an isocyanate component selected from n-functional polyisocyanates, wherein n is from 2 to 5. See column 3, lines 15-28.

Gardon et al. disclose that suitable crosslinking agents include polyisocyanates, blocked polyisocyanates and/or aminoplast resins. Aminoplast crosslinking agents are described as aldehyde condensation products of melamine, urea, benzoguanamine or other known compounds. See column 5, line 68-column 6, line 20. As noted in the rejection, Cymel 303, Cymel 1135, and Cymel 325 are mentioned as aminoplast cross-linkers. See column 6, lines 31-44. The

weight ratio of polyurethane polyol to aminoplast is said to be generally from about 90:10 to 40:60, preferably from about 90:10 to 50:50. See column 6, lines 49-52.

Examples 1, 2, 4-5 describe compositions containing 30%, 40% or 45 % by weight Cymel 303. Examples 7 and 8 describe compositions containing 40% by weight Cymel 1135. Example 9 describes a composition containing 23.8 % by weight (74 parts/311.4parts) of Cymel 303.

As can be seen from the above discussion, Gardon et al. do not disclose or suggest a composition as recited in applicants' claims wherein the amount of component A is at least 75% by weight, based on the total weight of components A, B, and C.

In the rejection, it is argued that Gardon et al. do not use the disclosed composition in an electronic device. However, it is asserted that such a use is rendered obvious by the teaching of Knudsen et al., which describes a dielectric composite laminate which can emply polyurethane polymers. See paragraph [0051].

Knudsen et al., however, provide no suggestion that would lead one of ordinary skill in the art to modify the coating compositions of Gardon et al. so as to arrive at an embodiment in accordance with applicants' claimed invention.

In view of the above remarks, it is respectfully submitted that Gardon et al., taken alone or in combination with Knudsen et al., fail to render obvious applicants' claimed invention. Withdrawal of the rejection is courteously requested.

Rejection under 35 USC 103(a) in view of Saunders et al. and Imken et al.

Claims 1-12 and 20-26 are rejected as allegedly being obvious in view of Saunders (US 4,291,130) in combination with Imken et al. (US 5,198,693). This rejection is respectfully traversed.

Saunders discloses a heat resistant, thermoset foam derived from a hydroxy-functional acrylic polymer and an aminoplast resin crosslinking agent. See, e.g., column 1, lines 26-30. The aminoplast resin can be an amine aldehyde resins, i.e., an aldehyde condensation product of melamine, urea, acetoguanamine or other known compounds. See, for example, column 2, lines 43-49.

In the rejection, it is alleged that Saunders teaches a composition containing 50% Cymel 303, citing column 3, line 35 and Example 1. However, the disclosure at column 3, line 35 does not relate to weight percentages of the amount of crosslinker in the composition. It relates to the weight percent of the **density of the formed foam**, relative to the density of the composition before foaming, i.e., the thermoset foam has a density of from about 10 to about 50 wt % of the density of the blend of copolymer and crosslinking agent prior to foaming. At column 3, lines 42-46, Saunders refers to ratios of from 1 to about 6 equivalents of crosslinking agent per equivalent of hydroxyl moiety of the copolymer.

In Example 1, the amount of Cymel 303 used in the composition is one part Cymel 303 per four parts of the copolymer particulate. See column 4, lines 43-46. Column 4, lines 65-68 refers to compositions containing 10-50 parts by weight of crosslinking agent per 100 parts by weight of copolymer.

Saunders does not disclose or suggest a composition as recited in applicants' claims wherein the amount of component A is at least 75% by weight, based on the total weight of components A, B, and C.

In the rejection, it is argued that Saunders does not use the disclosed composition in an electronic device. However, it is asserted that such a use is rendered obvious by the teaching of Imken et al., which describes Figure 8 as illustrating a cured polymer layer 25 placed on aluminum oxide layer 23 by electrophoretic coating with a melamine-acrylic solution, wherein the aluminum oxide and polymer layers 23 and 25 serve as an electrically insulating dielectric material for aluminum core 20. See column 5, lines 45-50.

Imken et al., however, provide no suggestion that would lead one of ordinary skill in the art to modify the coating compositions of Saunders so as to arrive at an embodiment in accordance with applicants' claimed invention.

In view of the above remarks, it is respectfully submitted that Saunders, taken alone or in combination with Imken et al., fails to render obvious applicants' claimed invention. Withdrawal of the rejection is courteously requested.

Rejection under 35 USC 103(a) in view of Chen et al. and Knudsen et al.

Claims 1-12 and 20-26 are rejected as allegedly being obvious in view of Chen et al. (US 5,330,840) in combination with Knudsen et al. (US 2002/0176989). This rejection is respectfully traversed.

Chen et al. disclose a melamine-cured polyurethane coating composition described as being useful for manufacturing toner fusing members. The polyurethane is the polycondensation product with an organopolysiloxane diol. The coating composition comprises a crosslinked block copolymer product of the polyurethane block copolymer and a melamine resin.

Chen et al. disclose that the melamine resins, Cymel-303, Cymel-380, and Cymel-385, can be used as crosslinking agents in amounts generally constituting from 2 to 80 wt. %, preferably 10 to 40 wt. % of the final coating compositions. In Examples 8, 9, and 10, the amount melamine resin employed is 20 wt %, 20 wt %, and 30 wt %, respectively.

While Chen et al refers to a broad range of the amount of crosslinker agent, it is evident that the suggested amount to be used is at the lower end of the range. Thus, Chen et al. do not disclose or suggest a composition as recited in applicants' claims wherein the amount of component A is at least 75% by weight, based on the total weight of components A, B, and C.

Moreover, Chen et al. provide no suggestion of using the composition in an electronic device as recited in applicants' claims. In the rejection, while it is acknowledged that Chen et al. do not use the disclosed composition in an electronic device, it is asserted that such a use is rendered obvious by the teaching of Knudsen et al. However, Knudsen et al. provide no suggestion of using the polyurethane-polysiloxane polymers of Chen et al. for such a use. Knudsen et al. refer to siloxanes used as crosslinking agents, not the polyurethane polymer.

In view of the above remarks, it is respectfully submitted that Chen et al., taken alone or in combination with Knudsen et al., fail to render obvious applicants' claimed invention. Withdrawal of the rejection is courteously requested.

Obviousness-Type Double Patenting Rejection

Claims 1-17 and 21-26 are rejected as allegedly being obvious in view of claims 1-20 of

Serial No. 11/501,724 in combination with Sinclair et al. (US 6,462,107). This rejection is respectfully traversed.


As discussed above, Sinclair et al. do not teach or suggest applicants' claimed invention. Nor do Sinclair et al. provide any suggestion of using the composition recited claims 1-20 of Serial No. 11/501,724 in a manner that would render obvious applicants claimed invention.

In any event, as indicated in the Office Action, this rejection is provisional, since neither application has been patented. In fact, Serial No. 11/501,724 has not even yet had a first Office Action on the merits. The instant application was filed before Serial No. 11/501,724. As indicated in MPEP § 804(I)(B), when there is a provisional rejection between two applications the rejection can continue to be made "as long as there are conflicting claims in more than one application **unless** that 'provisional' double patenting rejection is the only rejection in at least one of the application. Since all other rejections have been addressed by the amendments and arguments presented above, the Examiner should withdraw this provisional rejection in this earlier filed application and allow the application to issue without a terminal disclaimer, as described in MPEP § 804(I)(B).

In view of the above remarks, withdrawal of the obviousness-type double patenting is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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Attorney Docket No.: MERCK-2775

Date: July 6, 2007